

**ABSTRACT**

A method for making a glass ceramic, optoelectronic material such as a clad optical fiber or other component for use in an optoelectronic device. The method comprises preparing a glass composition batch to yield a precursor glass for a nanocrystalline glass-ceramic that is doped with at least one kind of optically active ion, such as a transition metal or lanthanide element; melting the batch; forming a glass cane; surrounding the cane with a chemically inert cladding material shaped in the form of a tube; drawing a glass fiber from the combined precursor-glass "cane-in-tube" at a temperature slightly above the liquidus of the precursor glass composition, and heat treating at least a portion of the drawn clad glass fiber under conditions to develop nanocrystals within the core composition and thereby forming a glass ceramic.

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